BLADE AND NOZZLE DIMENSIONS

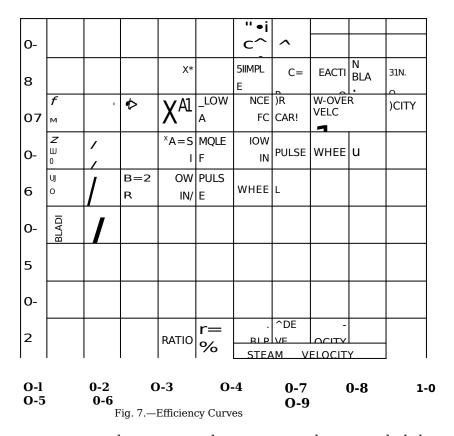
B (fig. 7). It will be seen, however, that maximum efficiency attainable with the velocity compounded wheel is not as high as for the simple impulse stage, and consequently where the highest possible blading efficiency is aimed at a turbine composed entirely of simple velocity stages is frequently adopted.

For many conditions, however, the two-row wheel has

considerable practical advantages, since with a ratio of r=0-23 instead of 0-46 in the case of a single-row wheel, the amount of heat utilized per stage is four times

0

0



as great, and consequently steam may be expanded down to a much lower pressure in the first stage; and in many cases the gain due to the lower leakage and steam frictional losses compensate for the lower blading efficiency.

Carry Over of Energy from Stage to Stage.—In case multi-stage turbine a certain proportion of the residual velocity one may be carried through to the succeeding stage and be utilized. Referthere ring back to fig. 6, the absolute velocity of discharge C2 represents certain amount of energy which may further be utilized in the turbine, and sequently as a true basis of comparison the blade efficiency be may with a certain amount of the carry-over energy. The effect the efficiency on curve of considering carry-over is shown at A_{1?} and, as be seen later, curve gives a fairer comparison with the reaction blading efficiency curve C.